

# Notice of Allowability

Application No.

10/632,764

Examiner

Ling-Siu Choi

Applicant(s)

DAR ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to the Amendment filed 06/17/2004.
2. ☐ The allowed claim(s) is/are 1-14.
3. ☒ The drawings filed on 04 December 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 05/05/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action is in response to The Office Action filed June 17, 2004. Claims 1-28 are now pending, wherein claims 15-28 are withdrawn from consideration due to the Restriction requirement.

#### ***Examiner's Amendment***

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CAR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Charles W. Almer on August 30, 2004.

3. The application has been amended as follows:  
Cancel claims 15-28 without prejudice.

#### ***Allowable Subject Matter***

4. Claims 1-14 are allowed.

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5. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Dar et al. (US 2003/0149195 A1), Caneba (US 5,173,551), Matyjaszewski et al. (US 6,121,371), and Hoshino et al. (JP 04-002963 A).

The present invention relates to

<b>dispersion</b>	copolymer particles having greater than 1 living radicals / particle
	dispersion medium
wherein (a) the dispersion contains no chemical capping agents (b) organic solvent is not required to cause copolymer precipitation to form the copolymer particles (c) the polymer particles are not formed via free radical retrograde precipitation polymerization	

(summary of claim 1)

Dare et al. disclose a dispersion comprising polymer particles dispersed in a dispersion medium, wherein each polymer particle contains greater than 2 living radicals which are not chemically protected or capped and has an average particle size of from 10 to 5,000 nanometers (claims 1 and 7). However, Dare et al. does not teach or fairly suggest a dispersion comprising a polymer particle which are not formed via free radical retrograde precipitation polymerization.

Caneba discloses a dispersion obtained by the steps of (1) forming an admixture of reactants including predetermined amounts of a monomer, a solvent, and a free-radical forming agent; (2) initiating a free-radical precipitation polymerization reaction to form a plurality of polymer radicals; (3) precipitating a polymer from the polymer radicals; (4) maintaining a

polymer-rich phase of the admixture of reactants at a temperature above the lower critical solution temperature of the admixture, and (5) controlling the pressure and temperature of the admixture of reactants to control the rate of propagation of the polymer (claim 1). In view of step 5, the precipitation of the polymer radical in step 3 would possess at least one living radicals. Caneba does not teach or fairly suggest a dispersion comprising a polymer particle which are not formed via free radical retrograde precipitation polymerization.

Matyjaszewski et al. disclose a copolymer emulsion obtained by polymerizing at least one polymerizable monomers in the presence of a system comprising (a) a suspending medium; (b) a monomer phase suspended in the suspending medium; (c) a surfactant; (d) an initiator having one or more radically transferable atoms or groups; and (e) a catalyst system which is at least soluble in both monomer phase and in a polymer phase generated during the polymerization, wherein the copolymer emulsion exhibits the characteristics of living polymerization (abstract; claim 1). Matyjaszewski et al. teach a dispersion obtained from atom transfer radical polymerization, wherein a transition metal catalyst acts as a chemical capping agent. Thus, Matyjaszewski et al. do not teach or fairly suggest a dispersion comprising a polymer particle without containing chemical capping agents.

Hoshino et al. disclose a magnesium particle comprising a stable radical compound and a fine particle (abstract). However, Hoshino et al. do not teach or fairly suggest a dispersion comprising a polymer particle containing greater than 1 living radicals.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the

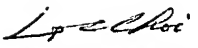
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payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.

  
**LING-SUI CHOI**  
**PRIMARY EXAMINER**

Ling -Siu Choi, Ph.D.

September 4, 2004